

AMENDMENTS TO THE DRAWINGS:

Drawing Figure 2A has been amended to change "14-1" to  
"14-4".

REMARKS

The application has been amended and is believed to be in condition for allowance.

Drawing Figure 2A has been amended to change "14-1" to "14-4". Applicant appreciates the Examiner's suggestion in this regard. Withdrawal of the drawing objection is solicited.

Claims 3-7 were objected to.

These claims have been amended as necessary. See that claim 4 depends from claim 2, and that claim 2 recites a mandrel.

Claims 8-9 were rejected as indefinite.

The claims have been amended to remedy the stated bases of rejection. Reconsideration and withdrawal of this rejection are therefore requested.

New claims 11-12 are added based on recitations removed from claim 8.

Claims 1-2 were rejected as anticipated by REINHART 4,858,264.

Claims 1-2 were rejected as anticipated by SANDT 4,137,588.

Claims 1-2 were rejected as anticipated by KAWAI 5,287,582.

Claims 1-2, 4, and 8 were rejected as anticipated by PIERCE 5,353,465.

Claim 3 was rejected as obvious over PIERCE.

Claims 5-7 were rejected as obvious over SANDT in view of SEXTON 5,314,512.

Claim 9 was rejected as obvious over PIERCE and SANDT.

Claim 10 was rejected as obvious over PIERCE and SANDT in view of TOPIARZ DE 19949071.

Claims 2 and 4-5 have been brought into claim 1.

Thus, claim 1 now requires the head be made of a material selected from polyetheretherketones, polyoxymethylenes, polyetherimides or epoxy resins and is non-abrasive and with a hardness sufficient to cut off chips of mastic and resist wear, but not too hard so as to give rise to scratches under the effect of vibratory alternating movement. This is supported at least by specification page 7, lines 23-26. Claims 13-14 are based on amended claim 1. New dependent claims were also added as discussed below.

The rejection of claim 5 as obvious over SANDT in view of SEXTON 5,314,512 is not believed to be viable.

See that SEXTON is an abrasive tool with a polyetheretherketones matrix. Such a tool would lead to scratches and therefore would not be used in a tool of the type now recited since abrasive tool heads are excluded from the claims.

In SEXTON, the polyetheretherketone is used for its relatively high viscosity and for processing in moulding equipment, in order to realize a thermoplastic polymer matrix for

the retention of abrasive particles, whereas, in the presently recited device, there is loaded, e.g., carbon or glass fibers, just to increase the hardness but avoiding being an abrasive tool.

To modify the abrasive tool of SANDT to have the recited tool with a non-abrasive head is non-obvious.

The specification discusses that the head 38 is the contact member with the mastic. This head must be made of a material whose hardness is sufficient to cut off chips of mastic and resist wear, but not too hard so as to give rise to scratches under the effect of vibratory alternating movement.

These two parameters are antithetical, which is why it will be understood that until the present such a device has not been used because those skilled in the art are dissuaded from having resource to such means.

The specification discusses that numerous tests have been carried out and there result certain well adapted particular materials. It was then necessary to determine the production of these tools, which permits an orientation toward the final choice for such or such a user.

Among the materials giving the best results, are polyetheretherketones (PEEK), polyoxymethylenes, polyetherimides or epoxy resins.

As to production, the preference is given to polyetheretherketones loaded with carbon or glass fibers. When

the load is carbon, although the quantities are very small, the use in aircraft is questionable because the carbon creates corrosion in contact with aluminum and its alloys. The preference thus is rather for polyetheretherketones, loaded with 30% glass fibers.

There is no motivation to move from abrasive tools to the non-abrasive tool currently recited. Therefore, each of the claims is believed to be non-obvious.

Reconsideration and allowance of all the claims are respectfully requested.

Should there be any matters that need to be resolved in the present application, the Examiner is respectfully requested to contact the undersigned at the telephone number listed below.

The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 25-0120 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

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REL/lk

**APPENDIX:**

The Appendix includes the following item:

- a Replacement Sheet for Figure 2A of the drawings